

2003

Choral Music Education: A Survey of Research 1996-2002

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Choral Music Education:
A Survey of Research 1996-2002

by

Amber Turcott

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
College of Visual and Performing Arts
University of South Florida

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Date of Approval:
July 8, 2003

Keywords: choir, chorus, vocal, voice, singing

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ABSTRACT

The purpose of this study was to review and summarize selected choral music education research published between 1996-2002. Four major research surveys in this area were previously published by Gonzo (1973), Hylton (1983), Phillips (1992), and Grant and Norris (1998). Each of these authors stressed a need for research in all areas of choral music education beyond the dissertation level and called for research that mimicked “real-world” experiences that would benefit choral music educators.

This study investigated the following: (a) whether research studies in choral music education have increased beyond doctoral dissertation studies; (b) whether previous research studies have been replicated and/or expanded; and (c) whether current research attempted to solve real-world problems in choral music education.

After reviewing the selected literature, the author categorized it into the following broad areas: (a) vocal technique/pedagogy, (b) descriptive studies, and (c) assessment/evaluation. The literature was identified in reviews of American, professional peer-reviewed journals by way of computer database searches in *ERIC*, *Education Abstracts*, *Humanities Abstracts*, *International Index to Music Periodicals*, *RILM Music Abstracts*, and *Wilson Select Plus*.

Due to the nature and scope of the study, the literature excluded doctoral dissertations unless they were later published in American, peer-reviewed journals.

Notable findings in this literature review include: (a) a current trend toward more choral music education research in general, both at the doctoral level and beyond, (b) continued studies on vocal pedagogy and rehearsal/conducting techniques, (c) increased studies on curriculum and assessment, and (d) increased numbers of experimental studies.

Though the research has shifted from primarily dissertation studies, most of these were preliminary in nature and need to be expanded and/or replicated. In addition, a larger variety of research methods are needed, especially longitudinal and qualitative studies. Although choral music education studies are more organized and systematic than in the past, many areas are yet unexplored and many questions remain unanswered.

Background/Introduction

During the second half of the 20th century, several research articles summarized findings across a broad range of music education specialties. Choral music education research was a prevalent topic of interest in these publications. In the field of choral music education, four principal articles published from the 1970's to the late 1990's summarized significant findings in choral music education research. These articles are as follows: "Research in Choral Music: A Perspective" by Carroll Gonzo (1973), John B. Hylton's, "A Survey of Choral Education Research: 1972-1981" (1983), Kenneth Phillips's, "Research on the Teaching of Singing" (1992), and "Choral Music Education: A Survey of Research 1982-1995" by Joe Grant and Charles Norris (1998). While there are striking similarities among the articles, each provides unique insight in the field of choral music research. This paper highlights the content of the three articles, compares and contrasts each, and investigates research in the field of choral music education for the seven years following the Grant and Norris review.

Gonzo's article (1973) summarized research up to 1973 and was the first author to synthesize choral music research. He found that ongoing, thorough research in many areas of choral music, particularly in the areas of vocal repertoire, analyses of choral compositions, college curricula, and choral composers was sorely lacking (21). Gonzo limited the scope of the article to include "historical accounts of public school choral music, physiological aspects of choral singing, choral rehearsal techniques and the conductor, and the pitch, rhythmic and harmonic detection ability of choral directors and music students" (22).

Many of the findings in the history section of the article dealt with the evolution of choral tone and technique. Gonzo highlighted the emphasis of choral sound rather than interpretation prevalent in the 1930's, the *a cappella* singing movement, and a later shift during the period of 1940-1962 to an emphasis on an "interpretive approach derived from the text and the music" (23).

In the second section, Gonzo summarized research involving the "physiological aspects of choral singing" (ibid). Here, he outlined a variety of findings primarily based on technology-driven research such as vowel and formant placement as examined by instruments such as "spectrographs, x-ray, cineflorographs, laryngoscopes," etc. (ibid). Videotaping students during rehearsal was also a primary mode of technology-driven research. The research suggested that "choral students could form standard vowels more efficiently if they were reinforced by seeing and hearing themselves" (24). Gonzo argued that much of this research reflected the impact of emerging technology on the research community and as new measurement instruments and techniques became increasingly available and affordable, they shaped the research agenda in our profession.

Many of the studies in the Gonzo article analyzed rehearsal and conducting techniques in an attempt to determine which specific rehearsal techniques and/or conductor behaviors affected students' musical understanding (26). Research suggested that using programmed tape recordings enhanced students' musical understanding in the areas of "style, rhythm, melody, harmony and timbre" (ibid). In addition, there was great disparity on the proper development of choral tone, including "tone production, diction, the singer's temperament, and the interaction of each upon the other" (27).

Gonzo claimed that many research findings had little to do with actual needs in the “reality” of music education, but rather were “generated by a curious union between public school personnel, college professors, and industry” (29). He stated that much of the research was performance-oriented and did not address “developing the musical understanding of the child” (30). He found that many research studies up to that point were descriptive in nature and, although they were potentially helpful to educators, there existed a need for more experimental research in choral music. Gonzo also claimed that researchers of choral music must acquire a clearer understanding of research techniques and that the summarized research reflected this need. Overall, Gonzo described the field of choral music education research as “fragmented and narrow in scope” and emphasized that “the need to put these problems into a hierarchy of priorities is long overdue” (29).

John Hylton summarized choral research findings for the decade following the period covered by the Gonzo study (1972-1981). He also categorized his findings by topic but limited them to the following areas of choral music education: “rehearsal techniques and choral methods, physiology and psychoacoustics, teacher preparation, historical studies, and miscellaneous studies” (2).

In the field of rehearsal techniques and methods, the research primarily focused on “curriculum studies, studies of the effectiveness on various conducting techniques and methods, as well as other studies related to choral rehearsal and/or pedagogy” (ibid). Much of the research in these areas focused more on student-oriented learning and the learning of musical elements and authentic performance style than did those in the earlier Gonzo article. Other studies focused on evaluation of choral performance, such as the

Cooksey (as cited in Hylton) seven-factor rating scale for evaluating choral performance. In addition, many of the studies were in survey/questionnaire format as opposed to the wealth of descriptive research found in the Gonzo survey.

In the areas of physiology and psychoacoustics, the content mirrored the Gonzo article in that many of the studies used technology as a means to observe or determine specific voice formants or vowel placements. One study by Clinard (as cited in Hylton, 12) “examined the relationship between selected background and personality factors and characteristics of singing tone.”

A large amount of the Hylton article summarized studies involving teacher training. This appeared to be a popular area of research at that time, and much of the research outlined conducting and rehearsal techniques. Taylor (as cited in Hylton, 14-15) conducted a survey to determine the “relative importance of sixty competencies desirable for teachers of choral music.” Hylton, like Gonzo, summarized research on videotaping students, though in this case the subjects were conducting students rather than choral ensemble members. Other research included studies on materials created to enhance conducting and rehearsal techniques by Gonzo and Forsyth (as cited in Hylton) and England (as cited in Hylton). However, most of these studies did not include enough empirical data to determine whether the materials improved students’ understanding and performance of the choral literature.

In the area of historical research, the literature in the Hylton article mainly focused on the influence of major choral conductors/teachers such as the Christiansen

family as well as the development of various choral singing traditions, such as the *a cappella* tradition and the interpretive tradition brought about by Robert Shaw (17).

Hylton described the research in historical accounts as “sparse” -- an opinion similar to that found in the earlier Gonzo article.

Several miscellaneous studies also were included in the review. Among these included a study on the meaning of the choral experience for the participants, which demonstrated a trend toward a more student-centered approach to the teaching of choral music that was markedly absent in the Gonzo study. In addition, research emerged in response to the trend in “aesthetic education” and took the form of survey and questionnaire studies that attempted to determine “musical and nonmusical factors which contributed to the aesthetic experience” (19).

Hylton discussed his findings as “diverse” and described the choral experience as a “complex phenomenon” (21). He claimed that many of the problems outlined by Gonzo ten years earlier continued to persist during the next decade. In accordance with Gonzo, Hylton claimed that “research in choral music education still must be characterized as fragmented. The need for establishing priorities remains” (22). Hylton also stressed that the overwhelming majority of choral education research occurred at the doctoral dissertation level and though these studies were “well thought out and carefully conceived. . . As long as research is being accomplished primarily at colleges and universities, the topics selected will continue to reflect the widely divergent views of various doctoral candidates and advisors as to the proper focus of such inquiry. . . Efforts must be made to encourage university faculty members and others in the field of choral

music to pursue ongoing programs of meaningful research” (ibid). Furthermore, Hylton mirrored Gonzo’s earlier opinion that many of the studies lacked real-world focus and appeal and that the research inadequately addressed the daily problems of public school teachers (ibid).

Kenneth Phillips summarized research on the teaching of singing rather than choral music education, meaning that the reviewed research addressed issues related to that of the *individual* singing voice. His research was summarized in a chapter of the 1992 edition of the *Handbook of Research on Music Teaching and Learning* and contained three main sections: physiological parameters of singing, psychological parameters of singing, and the adolescent changing voice.

In the physiological parameters section, much of the research included studies on breathing and posture. While correct breathing and posture are known factors in “good” singing, many opinions existed on how this should be accomplished (569). Many of the studies were never replicated or were found to contain design flaws. For example, although Phillips cited Brody’s 1948 study on the effects of breath management instruction with children as significant for “showing that research on the physiological parameters as related to singing is possible with children and adolescents,” Phillips also stated that the design of the early study was “weak” (569).

Other researched foci included tone production, vocal registration, and diction and expression. Again, while many of these studies showed promise, most were never replicated. Pitch discrimination constituted much of the research in this category. Many studies, such as the one by Welch, Howard, and Rush (as cited in Phillips), explored “the

relationship of visual feedback to pitch accuracy in singing” (572). The study examined whether software designed to increase student pitch accuracy was more effective when used in conjunction with private vocal lessons. The results indicated that the group receiving both software-driven and verbal feedback improved the most (ibid). Also included in this section were studies on the effects of various types of vocal modeling. Two studies found that “children matched pitch more accurately when vocal modeling was presented in the child’s singing range” and that the “female or male falsetto model was more effective” for this purpose (573).

There were several studies done during this time on the adolescent changing voice. Many of these addressed the “problems associated with teaching young men to sing” (ibid). The article outlined two major schools of thought in teaching the male changing voice: Cooksey (as cited in Phillips) and Swanson (as cited in Phillips). Phillips discussed the conflicting nature of the articles and the need for subsequent studies; particularly research on the adolescent female changing voice. Gackle (as cited in Phillips) addressed this topic by outlining various stages of the female voice change and its identifying characteristics, such as limited range and breathiness, but almost none of the other studies during this time addressed this particular topic.

Phillips summarized his findings by stating, “research on the teaching of singing is more common” than research on singing itself and that the music education profession produced “a considerable amount of knowledge” (574). However, he cautioned that many of the studies were never replicated, with the exception of vocal modeling and should be viewed with some skepticism (ibid). Phillips stated that many of the techniques

commonly associated with teaching singing such as “mimicking sirens to discover the head voice” were never scientifically proven or “investigated for their real benefits” (ibid). Furthermore, he claimed that “investigating the appropriateness and results of various techniques for confident and accurate singing among children is an important area of study in music education. . . for much remains to be learned” (ibid).

A final research article summarizing choral music education research followed the previous surveys conducted by Gonzo and Hylton. Joe W. Grant and Charles Norris addressed choral research between 1982 and 1995. Grant and Norris categorized their findings into several broad areas: “singing and vocal pedagogy, curriculum and materials, teacher/conductor behavior, teaching methods and rehearsal techniques, teacher education, and miscellaneous studies” (22).

In the areas of singing and vocal pedagogy, the research focused more on children’s singing than in the past. Studies such as those by Yarbrough, Bowers, & Benson (as cited in Grant & Norris) continued to measure the quality of singing models for children. A few additional, minor studies on the adolescent female voice were also noted.

In the area of curriculum, a more comprehensive approach to choral education and research began to unfold. In addition, many studies began to develop a higher level of sophistication, especially with regards to data collection and evaluation, such as the study by Burris (as cited in Grant & Norris), who designed a visual model based on the learning theory of Jerome Bruner (26).

Many studies focused intently on the “effects of context, conditions, and a variety of variables on sight-singing skills” (29). Henry and Demorest (as cited in Grant & Norris) found that a significant factor in sight-singing success was the number of years a student received piano instruction. Other attempts to determine factors contributing to success in sight-singing brought mixed results.

Teacher behavior and use of class time were the focus of many studies during this era. This was not surprising given the popularity of teacher accountability and the concern for the quality of education during the period of the research. Many studies were also included in the area of teacher education. Grant (as cited in Grant & Norris) described the status of undergraduate choral music education programs at five Midwestern colleges and universities. Students who completed questionnaires stated that they needed “more time in conducting, identification of school choral literature, choral methods, rehearsal techniques, and vocal pedagogy” (40).

Under the miscellaneous category, studies attempted to determine factors for public school choral enrollment. Miller (as cited in Grant & Norris) suggested that teacher interaction level, especially conspicuousness in the school, was a significant predictor for enrollment. In the study, “high teacher interaction related to more positive perceptions of . . . programs” (45).

Overall, Grant and Norris discovered many significant shifts in choral music research from 1983 to 1995. A greater emphasis on the study of singing and adolescents was considered a positive development to choral music education (47). They also stated that there was a dramatic increase in the number of studies devoted to sight-singing and

general musicianship. However, they cautioned that many of these studies were preliminary and that more research in this area is needed. Assessment also became a more important educational issue during this time, with four studies devoted to this topic. However, two of the studies were based on ensemble performance evaluation, therefore Grant and Norris stressed the need for additional assessment studies of a more comprehensive nature in order to reflect the changing needs of students and current curricular demands (48).

To summarize, Grant and Norris found that, though some of the issues “cited by Gonzo in 1973 and . . .by Hylton in 1983 remain, progress has been made” (ibid). They found “less fragmentation. . .with strong concentrations in the areas of children and adolescent singing, choral literature, sight-singing, and teacher education” (ibid). However, the fact that “relatively few choral music educators continued any form of research beyond their doctoral dissertation” remained a problem during this time (ibid). Grant and Norris insisted that the quality of future choral music education research “rests in the hands of collegiate faculty who must encourage their students to choose both appropriate methods and topics worthy of research, and who must foster the belief that remaining and active researcher throughout one’s career is an integral part of being a productive choral music educator”(ibid).

Though much progress has been made in the area of choral music research from the period when Gonzo first published his article in 1973 to the most recent literature review by Grant and Norris (1998), much work remained.

All three of the studies revealed that choral music educators must continue to research beyond the dissertation level and to arm themselves with the knowledge necessary to produce valuable, insightful, and cohesive research.

Method

This study reviewed major research articles in the field of choral music education published after the Grant and Norris article in an attempt to determine the following: (a) whether research studies beyond the doctoral dissertation level in choral music education have continued to increase in number; (b) whether recent research has replicated or expanded prior studies as needed; and (c) whether the latest research attempted to solve “real-world” problems in choral music education.

The literature was identified in reviews of American, professional, peer-reviewed journals by way of computer database searches in *ERIC*, *Education Abstracts*, *Humanities Abstracts*, *International Index to Music Periodicals*, *RILM Music Abstracts*, and *Wilson Select Plus*. Due to the nature and scope of the study, the literature excluded doctoral dissertations unless they were later published in American, peer-reviewed journals. The studies reviewed were categorized into the following broad areas: (a) vocal technique/pedagogy; (b) descriptive studies; and (c) assessment/evaluation.

Vocal Technique and Pedagogy

A majority of the research investigated topics related to vocal/choir rehearsal techniques and pedagogical issues. Two studies (Klinger, Campbell, & Goolsby, 1998 and Phillips and Aitchison, 1997) studied the singing performance of elementary-age children.

Klinger, Campbell, and Goolsby attempted to determine whether children learned songs more effectively by a whole-song (immersion) or a phrase-by-phrase approach. They conducted a quasi-experiment of two intact classes and taught each class two songs; one by immersion, the other phrase-by-phrase. Results indicated that significantly fewer performance errors were made when children learned by immersion, which was surprising since, according to the investigators, most elementary music teachers traditionally used the phrase-by-phrase method during the time of the research. In addition, they called for replication of the study, stating that if future research yields similar results, teaching songs by immersion may result in improved singing skills for elementary school students. They also stated that there has been little research on the common practice methods of elementary music teachers in general and stressed the need for more research in this area.

Experimental studies on behavior modification to produce desired results were a large source of choral music research during this time, reflecting a trend in choral music education research. Four such studies investigated various treatments and/or behavior modifications on choral performance.

Phillips and Aitchison (1997) studied the effects of psychomotor vocal instruction on elementary music students to determine whether it improved their singing ability. The investigators used experimental and control groups, with the experimental group receiving an additional 15 minutes per class period of instruction on vocal technique, including breathing exercises. The results suggested that the treatment was effective in

the development of breath support, but was inconclusive as to whether it improved overall singing ability.

Ekholm (2000) conducted a study to determine whether a student's singing mode ("soloistic" or "blended") affected the overall sound quality of a choir, as well as whether various seating arrangements affected choral sound. The study included 16 audio taped choral performances and 160 audio taped excerpts of randomly-chosen individual choristers' voices (chosen during the choral tapings). Five experimental conditions, including "blended" and "soloistic" singing techniques, as well as various seating and spacing arrangements, were applied.

Results indicated that there were definite differences in vocal production between blended and soloistic modes of singing. The study suggested that blending might be more challenging for higher voices; particularly sopranos. However, both choral conductors and voice teachers who evaluated the choral performances preferred the blended sound. The research suggested that when asked to sing soloistically, choir members got louder or "oversang." In addition, acoustic seating, in which singers were placed near others with similar vocal characteristics, was slightly preferred over other seating arrangements, particularly by voice teachers. Both choristers and performance evaluators favored wider spacing among choir members. Ekholm stated that a definite difference between solo and choral singing was present in the study, but that further research on choral sound is needed to adapt soloistic technique to a choral setting while providing an optimum choral sound.

In a similar study, Daugherty (1999) investigated whether various choral formations and seating arrangements were preferred by auditors and choir members. Daugherty administered questionnaires to both groups. Results indicated a preference for a mixed-voice formation with close spacing and a sectional formation with wider spacing. Most choir members preferred wider spacing, stating that they could hear themselves and the ensemble more clearly. The most significant finding was that the spacing of choir members influenced choral sound more so than did arranging singers by voice type or part.

Dunn (1997) examined the effect of rehearsal hierarchy and reinforcement on attention, achievement, and attitude of choir members. The two purposes of the quasi-experiment were to observe musical progress over a structured set of rehearsal in which various skills were emphasized and to examine the effects of teacher reinforcement during the rehearsals. He used two intact classes and identically structured the rehearsal time for each with the exception that the experimental group received teacher feedback and reinforcement while the control group did not.

The results of the study were somewhat inconclusive, indicating that the experimental group was more often “off-task” than the control group. However, research suggested that the reinforcement influenced the treatment group’s musical achievement, as indicated by their higher post-test scores as compared to the control group. The students in the experimental group also viewed music, rehearsals, and the teacher more positively than did the control group, as reflected by student responses given on a

questionnaire at the conclusion of the study. Dunn suggested that additional longitudinal studies are needed to substantiate the findings.

Skadsem (1997) analyzed how various teaching methods affected singers' dynamic responses. During the investigation, verbal instruction, musical score instruction, conductor gestures, and choral volume change were examined to determine the effectiveness of each on a choir's dynamic level. Additionally, Skadsem explored whether high school singers, college singers, and conductors responded differently to various musical dynamic changes and methods.

Results indicated that singers responded more strongly to indicators of soft rather than loud dynamics and that high school students and conductors responded more strongly to dynamics overall than did college students. In addition, there was a positive correlation between eye contact and response to gestural excerpts and looking at the score and response to written excerpts.

One study by Phillips (1999) outlined second-year results of a longitudinal study of several factors relating to singing in a general music class. The entire third-grade population of a rural, Iowa school participated in the study, which involved observation of their music classes through grades 3 and 4. Two investigators met with the students during regular class time for approximately ten minutes of group singing lessons. After 27 weeks, the participants took tests measuring music knowledge, aptitude, and attitude toward singing and general music after which they were individually tested for pitch accuracy, vocal range, and breathing mode.

Data indicated that 72 % of the participants scored a grade of “C” or better on the music knowledge test. However, only 28 % of the participants stated that they liked general music as reported on the attitude survey. The singing lessons scored slightly higher, with 39% of participants stating that they liked them. In addition, investigators scored only 56 % of the participants as singing accurately after two years of formal lessons. This perhaps indicated a need to restructure the general music curriculum to better fit the needs of students, to not only more effectively engage them but also to more effectively teach proper singing technique. Phillips cited the National Standards for Music Education (MENC, 1994), which called for accurate singing ability among students and stated that music educators must continue to investigate ways to improve the singing ability of children.

In two articles published in 1998, Steven Demorest explored the area of sight-singing in the choral rehearsal. Since the advent of the National Standards for Music Education, which state that students should be able to “read at sight simple melodies in both the treble and bass clefs,”(MENC as cited in Demorest, 1998a) sight-singing has been considered an important part of a comprehensive choral music curriculum.

In the first of these studies (1998a), Demorest investigated whether regular, individualized testing of sight-singing skills affected the sight-singing performance of individuals as opposed to those receiving only group sight-singing instruction. Beginning and advanced choirs were chosen from six high schools and members of each intact group were randomly chosen to be part of an experimental group that received individual testing of sight-singing skills in addition to their regular classroom instruction.

Results were somewhat inconclusive due to the different protocols and teaching methods of the various schools. However, the experimental group showed a significant gain on sight-singing melodies in major mode. Demorest stated that “due to the relatively brief treatment period. . . the broad range of methods used, and the variety of student backgrounds...” (189) further research “should focus on testing the procedure over a broad range of instructional conditions, including instrumental sight-reading” (191). He also stressed the importance of individual assessment in music classes since it provides valuable feedback on student progress.

In the second of these studies (1998b), Demorest reviewed research in the area of sight-singing in the secondary choral ensemble, categorized the literature as either descriptive or predictive, and noted that the majority of research was in the form of descriptive surveys. Much of the literature suggested a great variation in the sight-singing methods and materials used among various choral programs. In addition, many of the survey studies indicated that “moveable-do” was the preferred syllable system for teaching sight-singing, but studies were conflicting as to which, if any, method was more effective. In the first study (Henry and Demorest as cited in Demorest, 1998b) there was “no significant difference in individual sight-singing performance between students from the moveable-do and the fixed-do choirs” (5). In a later study (Demorest and May as cited in Demorest, 1998b), the moveable-do choirs scored significantly higher than the fixed-do choirs, however, this may have been attributed to the fact that “the moveable do

students had been trained since kindergarten. . .whereas the fixed-do students switch from moveable to fixed-do in the seventh grade” (6).

In addition, Demorest reviewed several predictive studies focusing on individual sight-singing achievement. He stressed the need for individual accountability, citing an article by Bennett who stated, “as few as one student in an ensemble may actually be reading during group exercises, with the rest following in close imitation” (5). Many of the studies indicated that singing in choir alone was not enough for a student to succeed at sight-singing at grade level. The studies also suggested that a broad range of musical activities, specifically having a piano in the home and instrumental music instruction, were strong variables in predicting sight-singing ability.

Perhaps singing in a choir alone does not produce the same results because many teachers do not regularly teach sight-singing skills until it is time for a district or state competition. In one study (Daniels as cited in Demorest, 1998b), half of survey respondents reported spending 10 % or less of class time devoted to sight-singing.

Demorest also discussed the fact that little experimental research has been done in the area of sight-singing at the secondary level. He attributed this to “a general lack of attention given to sight-singing.... the great variety of teaching approaches used, the multiplicity of variables that can influence student achievement in a school setting, or the difficulty of controlling for prior experience and other extraneous variables” (9-10). Demorest stated that although these studies provide a stepping-stone as to how and how often sight-singing activities occur in the choral classroom, more experimental and observational research is needed. He also stressed a need for a connection between

observations of teaching practices and individual student achievement in choral programs. Finally, he called for more qualitative, descriptive studies in order to get a “more complete picture of successful programs” (11).

Broomhead (2001) explored the relationship between individual versus ensemble expressive performance achievement. The study involved several advanced, large choirs that rehearsed the same piece of music for four weeks with no maximum rehearsal time limit imposed. Ninety-six randomly-chosen individuals from the participating choirs were selected to receive individual testing on their expressive and technical ability. Each student sang a portion of a rehearsed piece, then sang the unrehearsed piece, *America the Beautiful*. A multivariate analysis of variance (MANOVA) was used to compare the relationship between student expressiveness on the rehearsed and unrehearsed portions of the treatment.

The results suggested no significance between ensemble expressiveness and individual musical expressiveness. In other words, performing in an expressive ensemble did not guarantee an individual’s musical expressiveness when asked to perform alone. This suggested that although an ensemble as a whole may sing with great expression based on the demands of the conductor, individual students might know little about making expressive musical decisions on their own. In addition, Broomhead claimed that “time in an ensemble was related to individual expressiveness, but the level of that ensemble’s expressiveness was not. What affects individual expressiveness seems to be something general about the choral experience but not something specific about

expressive instruction in any given choir” (79). Broomhead stated that previous research has yielded mixed results and that more research in this area is needed.

Both Demorest and Broomhead articulated the need for research on individual student achievement in the choral classroom, which may often be overlooked in favor of superior ensemble performance. It would be potentially useful to investigate effective ways to incorporate individualized measurement and evaluation of individual student achievement in the choral classroom.

Descriptive Studies

Much of the research during this time focused on student attitudes and feelings about various aspects of choral music. Chinn (1997), McCrary (2001) and Taylor (1997) studied various classroom behaviors or cultural influences that affected choir members’ general attitudes about choir and their decisions to continue taking choral classes.

Chinn investigated whether cultural mistrust in African-American adolescent females affected their singing style and/or range. Forty-four African-American female volunteers who were enrolled in elective choral music classes participated in the study, which attempted to determine their level of “Caucasian mistrust” by using a survey instrument developed by Terrell and Terrell (cited in Chinn) called the Cultural Mistrust Inventory (CMI). Terrell and Terrell reported that cultural mistrust “develops as a result of direct or vicarious mistreatment and is perpetuated by the historical influence of slavery, economic oppression of the post-slavery era, discriminatory legislation, and segregation” (as cited in Chinn, 637). Chinn also cited research by Clinard that stated “prior recurring music experiences such as listening to specific music genres including

folk, jazz, and art music, were related to a student's singing tone characteristics" (ibid). Chinn suggested that African-American adolescent women, "whose vocal identities may be related to their ethnicity and values, may not trust a choral educator who attempts to teach them to sing in other vocal styles" (637).

According to survey results, participants were divided into either high or low Caucasian mistrust groups. Each participant listened to models of African-American female singers ranging from opera to gospel and rated each singer on a scale from highest to lowest. The singers in the audio excerpts were categorized as exhibiting a low to high range of African-American (as classified by Chinn) vocal characteristics. In addition, to assess the participants' singing styles, Chinn evaluated each participant on how many "African-American vocal traits such as breathiness, dips, glides, hard attacks," etc. that they performed when asked to sing *America* in a key and style of their choice (643).

Chinn argued that the participants categorized as having high levels of Caucasian mistrust demonstrated both lower singing ranges and more African-American singing traits than did the low Caucasian mistrust group. In addition, the high mistrust group generally preferred the audio taped excerpts of singers who displayed higher numbers of African-American singing traits. However, Chinn cautioned that this was a preliminary study done on a small scale and that further investigation is needed to determine whether cultural mistrust plays a role in influencing African-American females' participation in an elective school music program.

The great challenge is studies such as Chinn's is to design and conduct the research in ways which lead to new understanding and which do not exacerbate ethnic and

racial stereotyping. Although Chinn reviewed prior written research, the study did not clarify whether she consulted with sociologists or other experienced cultural experts during the course of the study. Future research in this area should include experts of this nature in order to avoid misinterpretation and/or cultural bias.

McCrary investigated “good” and “real” reasons that college students join and remain in choral ensembles. He cited a book, *Contemporary Music Education* (Madsen and Kuhn, 1994) and an article by Frederickson (1997), which described “good” reasons as aesthetic and altruistic in nature, and “real” reasons as social aspects of musical participation. Frederickson stated, “‘good’ and ‘real’ reasons to participate in music need not be exclusive of each other. Indeed, the two often function as equally desirable motivations” (as cited in McCrary, 23).

Nine-hundred-twenty-two participants responded to a questionnaire outlining influencing factors in their decision to join and/or remain in a traditional or gospel collegiate choir. It was found that the enjoyment of singing was the major influence in students’ decisions to join a choir, while other reasons included the following: (a) the fact that they missed singing in a choir after high school; (b) they attended a choir concert; (c) they wanted to meet other people; (d) their friends encouraged them to join; and/or (e) the course was required or fit a scheduling need.

Taylor studied how seventh- and eighth-grade choral students interpreted various types of teacher verbal praise. Four choral teachers and 80 of their students participated in the study. Each teacher was videotaped demonstrating two examples of “deserved” praise and two examples of “instructional” praise. She cited research by Morine-

Dershimer (1982) that described “deserved” praise as contingent on student performance or behavior and “instructional praise” as a method teachers used to serve a teaching purpose such as to “provide encouragement, make a student feel good, and/or to call attention to a student’s behavior or performance they would like other students to model” (537). Students watched the videotaped excerpts and chose one statement of four that “best reflected their understanding of the praise” (540). It was found that students were able to determine the difference between deserved praise and praise for either encouragement or instructional reasons and that student familiarity with a teacher was a strong factor in interpreting a teacher’s verbal praise.

As a second part of their earlier investigation (1997) on the effects of psychomotor skills instruction on the singing performance of children in grades 4-6, Phillips and Aitchison (1998) studied whether the skills instruction affected student attitudes toward singing and general music class. Data indicated that age and gender played greater roles in student attitudes than the additional vocal instruction, and that older students and males had less of an interest in singing than did younger students and females. The results also suggested that though the additional vocal pedagogy did not affect students’ attitudes about singing specifically, the experimental group exhibited more positive attitudes about music classes in general. However, no pre-test on student attitudes was given prior to the study, so these results should be viewed with caution.

Neill (1997) conducted a survey among middle school honor choir participants to determine how it affected their choice to take choir in high school. Results indicated that 92 % of the respondents planned to take choir in high school and 63 % of those students

claimed that the honor choir was an influencing factor. However, the students were already succeeding in choir at a high level, therefore the possibility existed that the students would have chosen to take choir regardless of their honor choir participation. It would be interesting to replicate the study and survey the participants' attitudes about choir prior to their honor choir experience.

Two studies during this time investigated the adolescent changing voice. While studies in the past such as those by Cooksey (as cited in Killian, 1999) and Gackle (as cited in Killian, 1999) attempted to determine factors and stages related to adolescent men's and women's changing voices, much more research in this area is needed. Two studies by Killian (1997, 1999) offered descriptive research on attitudes and stages of the changing adolescent male voice.

Killian (1997) surveyed adolescent boys whose voices had already begun changing as well as adult males about their perceptions of the voice-changing process. Participants were given a survey of open-ended questions regarding their own voice change. Questions included the following: whether they had any memory of the voice change process, how it affected their singing and talking activities, whether or not they planned on continuing singing after the change, and whether they or someone else first noticed the change. Participants were also asked to describe any positive and/or negative experiences associated with their voice change.

It was found that singers had a more vivid recollection of their voice change than did non-singers, boys had a more vivid recollection than did men of the change (probably due to the fact that it happened more recently), and that singers claimed more frequently

than did non-singers that the voice changing process significantly affected both their singing and speech. In addition, many of the participants claimed that they thought they were ill or were in pain when their voice began to change. Killian stated that though more research is needed, choral directors might be wise to address the possibility of vocal strain among both changing-voice boys and girls.

In a later study, Killian (1999) sought to “extend and update information about the changing voice” by including fifth- and sixth-grade boys in the popular Cooksey voice change rating system (as cited in Killian, 1999). In the author’s review of the research it was suggested that many boys begin the voice-change process earlier than previously thought. In the study, volunteer fifth- and sixth-grade boys were tested individually during music classes to determine the pitch and range of their speaking and singing voices. Each participant’s highest and lowest terminal pitch was determined using procedures outlined by Moore in 1995 (as cited in Killian, 1999).

The research suggested that adolescent male voices change earlier than previously indicated, with voice change definitely occurring among many fifth- and sixth-grade boys. Results also suggested that though the change probably begins at a younger age than Cooksey originally suggested, the Cooksey rating system concurred with the staging of the boys’ ranges and categories. These results also conform with various studies which suggest that the physical and sexual maturation of children occur earlier than previously indicated and that these results are continuous, meaning that the average onset of puberty may occur at a younger age in the future. Researchers speculate that factors relating to environment and diet, such as the addition of hormones to many foods in recent years,

may play a role in the early onset of puberty in adolescents (Talphade & Talphade, 2001).

Killian stated to view the results with caution because all of the participants in the study were volunteers who may or may not have already been better singers and that many of the boys experiencing embarrassing voice changing symptoms may have elected not to participate in the study. Killian stated that further investigation of other populations of similar subjects is strongly indicated.

Prickett (2000) explored whether vocal/choral music education majors possessed a more comprehensive basic song repertoire than instrumental music education majors. A list of twenty five songs were deemed “basic” to music education repertoire by a panel of music education experts and each of these was played from a cassette tape for 214 music education majors: 135 in an instrumental curriculum and 79 in a choral curriculum. In this session, students were asked to identify each of the pieces of music. Demographic information for the participants was not given.

Data indicated that there was no significant difference between the vocal and instrumental groups. Several of the pieces were not identified by either group, which surprised Prickett. Perhaps the results reflected a change in modern undergraduate methods classes or a trend in music education in general to move away from mainly singing activities and to incorporate other musical activities into the curriculum. However, Prickett stated that since singing is still a large part of the basic music curriculum, “college professors who are trying to prepare future teachers to be able to encourage community singing of a commonly held song repertoire will need to take this

lack of knowledge into consideration when designing courses. Activities to build this repertoire (indeed beyond the level of tune recognition to that of being able to sing the tune and words) would appear to merit inclusion in college course work” (8). It would be interesting to replicate this study using college/university music- and non-music majors in an effort to determine whether there was a difference in repertoire between the two groups.

Two descriptive studies, Forbes (2001) and Reames (2001), explored the repertoire selection practices of high school choral teachers. Forbes conducted a survey among choral music educators from five states. The participants were divided into two groups; those nominated by accredited choral music education university faculty as “outstanding” and those not nominated. A written survey and a telephone interview were conducted to determine factors such as demographic characteristics of the teachers’ schools and the types of repertoire selected. The survey also included a five-point Likert scale to “collect data on how frequently 21 identified sources of repertoire were used in the repertoire selection process” (106). Significant demographic differences were noted in the data between the two groups. The nominated directors tended to have larger total school enrollment, larger choral enrollment, more curricular choral courses offered, fewer minority students, and more years of teaching experience than did the directors who were not nominated; all factors that may have influenced the overall practices of the directors.

Data indicated that the nominated directors selected classical repertoire more often than did the non-nominated directors, that aesthetic experience and artistic demands played a greater role in the repertoire selection process among nominated directors, and

that nominated directors placed a significantly higher role on the educational rather than entertainment considerations of the repertoire.

Forbes stated that the “top seven criteria for selecting classical repertoire among all of the participants were (1) quality, (2) vocal performance skills that could be taught through a composition, (3) technical difficulty of the work, (4) potential of the work to provide an aesthetic experience, (5) musical elements that could be taught through the work, (6) vocal maturity of the singers, and (7) artistic demands of the composition” (111). Additional criteria were given for the selection of popular repertoire.

Research suggested that the non-nominated directors were more careful to select music that would “bring quick success, that the students will like, and that will meet the developmental needs of beginning students” (113). More of the non-nominated teachers frequently programmed popular music into their repertoire, but perhaps this was an indication of demographics (smaller, growing programs with more beginning students) than the mere preferences of the directors.

Forbes also claimed that several factors determined repertoire selection among high school choral directors, but that often, choir directors are not “structured or systematic in the way in which they approach repertoire selection” (117). Furthermore, he stated that additional research to help “clarify the relative importance of each of the factors identified in the study” (120).

Reams (2001) investigated high school choir directors' repertoire selection practices for their beginning groups, including criteria used for repertoire selection and the types of literature available. Reames surveyed choir directors in the state of Virginia

who were members of the Music Educators National Conference (MENC) to gain an understanding of their repertoire selection processes. The survey data were used to compare repertoire commonly selected by the directors with repertoire endorsed by choral authorities as appropriate for a beginning high school choir.

Results indicated that hearing a live performance of choral music was the predominant factor in choosing repertoire but that choral reading sessions and the directors' existing music libraries were also strong factors in repertoire choice. In addition, 89 % of the surveyed directors chose literature based on both technical and aesthetic criteria. A significant relationship was found in that directors with more years of teaching experience programmed more Baroque literature than did less experienced teachers. Overall, contemporary literature was the most frequently programmed repertoire with 68 % of the participants indicating that they programmed 20 % or more of their literature from this era.

Cosenza (2002) investigated the repertoire preferences of middle school choral students. Investigators played five choral excerpts (one each of Medieval, Baroque, Classical, Romantic, and Contemporary periods) for a group of 187 middle school students from two schools. In the study, two of the excerpts were paired and configured so that each excerpt was heard a total of eight times. Students were asked to choose which excerpt in each pair that they preferred. Thus, scores for each excerpt ranged from 0 (never preferred) to 8 (always preferred).

Data indicated that the Medieval excerpt scored lower than all of the others, although it scored higher among males than females and higher among sixth graders than

eighth graders. Overall, there was a chronological preference, with the most recent excerpts preferred more often than the earlier excerpts. Cosenza speculated that the Medieval work was perhaps preferred less often due to its contrapuntal texture as opposed to the homophonic texture of the other excerpts. Cosenza claimed that it was possible the participants, perhaps unaccustomed to hearing polyphony, perceived it more negatively than the other pieces. In addition, Cosenza stated that due to the adolescent age of the participants, which encompasses many changes in body and psyche, they may have preferred more familiarity and predictability in their music. Furthermore, accompanied excerpts scored higher than *a cappella* excerpts, correlating with an earlier study conducted by Prince (as cited in Cosenza) that suggested participants in a survey more often choose instrumental music over vocal music when asked to state a preference. Cosenza discussed implications for further research, beginning with a replication of the study to test the reliability of the results. She also suggested a need for factoring in variables related to texture (homophonic or polyphonic) and accompaniment (accompanied or unaccompanied) in future studies.

One descriptive study by Brendell (2000) investigated different aspects of the initial minutes of high school choral rehearsals. Brendell discussed the fact that though many prior studies investigated conductor behavior, rehearsal time, and performance evaluation, there has been little exploration of what types of behavior actually occur from the moment the bell rings to when the choir begins rehearsing music. This study investigated time was used, any types of rehearsal activity (such as vocal warm ups) that occurred, and the types and frequency of student off-task behavior during the initial

minutes of choir classes. Participants were 33 public high school choral conductors representing Florida Vocal Association (FVA) members in the area of northwest and north-central Florida. Conductors were audio taped and observed during an ensemble rehearsal of their most advanced choir. Prior to the study, various types of behavior were defined and then subsequently used to describe the observed conductors. Behaviors included the following: getting ready (passing out music, announcements, business, etc), warm ups (both physical and vocal), sight-singing, literature instruction (lecture or academic information regarding studied repertoire), and miscellaneous behaviors such as fire drills, p.a. announcements, disciplinary issues, etc. During the study, observers also scanned the choir and made note of students who were engaged in off-task behaviors. Interobserver reliability averaged .88 for activity coding and .93 for off-task behavior.

Data indicated that one-third of the conductors began rehearsal at the sound of the bell, while others waited several minutes after the sound of the bell to begin activities. Overall, student off-task behavior was lowest during sight-singing exercises (perhaps due to the level of student concentration required), and Brendell stated that, generally, off-task behavior decreased when students were involved in *active* learning experiences. However, it was not explored whether beginning rehearsal activities immediately after the bell resulted in a more effective rehearsal. While this preliminary study provided some useful observation, more in-depth studies on how more effectively use the initial minutes of their rehearsal time are needed. It would be interesting to replicate this study in an effort to determine which, if any, initial behaviors result in more effective choral rehearsals.

Assessment/Evaluation

Four articles focused on assessment and/or evaluation of teaching and/or student development. Though these concepts are related, assessment generally refers to the process of describing and differentiating data, while evaluation refers to the process of interpreting and making value judgments based on assessment criteria (Hopkins, 1998). Since the publication of the National Standards (MENC, 1994), assessment and evaluation practices have become more prevalent in the music classroom in an attempt to promote a more comprehensive curriculum by which individual students learn specific skills in music and are subsequently measured and evaluated to determine their individual achievement level. However, few of the reviewed studies addressed assessment and evaluation at the individual level. The four reviewed articles mainly focused on conductor and/or student behaviors or ensemble performance rather than individualized evaluation of learning.

Yarbrough and Madsen (1998) studied the evaluation of teaching in choral rehearsals. They conducted an extensive literature review and determined that the following factors positively contribute to teacher effectiveness: pacing, high-magnitude teacher personality, use of praise, and accuracy of content. Yarbrough and Madsen developed an instrument based on those criteria to evaluate teacher effectiveness. Eighty-nine music majors from a large, southern university watched seven videotaped excerpts of a university choir conductor and ensemble in several rehearsals over the course of a semester that included two contrasting choral pieces. The subjects were asked to rate the conductor in each excerpt on a scale of 1 (lowest) to 10 (highest) including “use of

rehearsal time, musicianship, accuracy, student attentiveness and performance, and overall teaching quality” (475).

Data indicated that the highest rated excerpt contained “less off-task student behavior, a higher percentage of approvals, more eye contact, more activity changes, and that the average length of both teacher and student activities was from 5-6 seconds” (ibid). Subjects rated the longer excerpts as slower-paced than shorter excerpts, therefore Yarbrough and Madsen cautioned to report the length of any excerpts used in follow-up studies. In addition, a high positive correlation was indicated between teacher intensity and student enthusiasm, with subjects rating those excerpts more effective in which the teacher was rated more “intense.” However, this study only evaluated one instructor and ensemble; therefore, further studies may yield data with different results. Additional studies, perhaps at the middle and/or high school level and on a larger scale, are needed to determine whether the same correlations exist in other populations.

One study (Levinowitz, Barnes, Guerrini, Clement, D’April, & Morey, 1998) assessed the reliability of an instrument to measure elementary students’ singing voices and explored other facets of elementary school children’s singing development. One-hundred-seventy students from five elementary schools representing a “diverse ethnic, intellectual, and socioeconomic population” (38) participated in the study, which was conducted by six graduate students who were also full-time elementary school teachers. The study was supervised under the direction of a choral faculty member at the students’ university. Investigators taught the students two criterion songs to all students in the selected schools by rote. The songs, taught in random order, consisted of one song in a

minor key, *In the Sea*, (Silver, Burdett & Ginn as cited in Levinowitz et al., 1998) and one song in a major key, *Row, Row, Row Your Boat*, from traditional folk song literature. One month after learning the songs, audiotapes of the randomly selected participants were made of the students singing the two songs. Six judges rated student performances using the *Singing Voice Development Measure (SVDM)*.

Interjudge reliability was calculated using a repeated-measures analysis of variance (ANOVA). With the exception of grade 2 reliability for the minor-key song, reliabilities for both the major and minor songs in grades 1 through 5 were “consistent and substantial” (40). In addition, the reliabilities for the major mode song were consistently slightly higher than those of the minor mode song in all grade levels. However, the minor mode song was lengthier than the major one, therefore it was suggested that there might have been more opportunity for inconsistency during the performances of the minor mode song. The data also indicated that reliability levels for grade 6 for both of the criterion songs were lower than those of younger children. Levinowitz et al. surmised that perhaps a preference for chest singing in sixth-grade students affected the results and subsequently recommended using an alternative assessment tool for students in grade 6 and above. In addition, because the minor-mode song was lengthier than the major-mode song, they suggested that there may have been more opportunity for inconsistency during the performances of the minor-mode song.

In addition to measuring the reliability of the instrument, Levinowitz et al. attempted to determine the developmental nature of the elementary-aged singing voice. Surprisingly, data indicated no significant differences in children’s singing voices in

grades 1-6. They stated that perhaps “a child’s use of his or her singing voice does not develop due to maturation as does the range of his or her voice. It seems reasonable to suggest, therefore, that these data confirm the notion that the use of one’s singing voice is a learned, complex skill” (Phillips, 1992 as cited in Levinowitz et al., 41). It was also suggested, however, that perhaps the fifth- and sixth-grade students did not perform significantly better than younger students due to motivational and/or social factors related to adolescence, such as not wanting to perform alone in front of one’s peers. Levinowitz et al. suggested further studies in the area of elementary school singing, particularly with the advent of the National Standards (MENC, 1994), which lists “singing alone and with others” as part of a complete music curriculum. They also suggested a need for the development of an assessment tool measure more accurately the singing development of pre-adolescent and adolescent students.

Davis (1998) explored the relationship between ensemble achievement and performance preparation of high school choir rehearsals by evaluating performance, observing time use, and classifying behaviors during teaching sequences (497). Davis observed rehearsals of two high school choral directors in Florida and their beginning and advanced ensembles. The ensembles were videotaped at regular intervals throughout the semester as well as during an adjudicated festival performance. Each tape was then analyzed for quality of teacher and student performance. In addition, Davis identified specific teaching behaviors as defined in earlier research and administered on an instrument called the *Continuous Response Digital Interface (CRDI)*, which automatically classified specific teacher behaviors into predetermined categories.

Results demonstrated an increase in performance at similar points for both choirs in one of the schools, labeled “School X.” The second school, labeled, “School Y” demonstrated performance increases at different points in the semester from School X, yet both of the choirs from School Y displayed progression at similar points in time. In comparing each of the choral directors, School X’s director spent more time giving verbal instruction than did the director of School Y. However, School X’s director also accompanied the choir on piano until a week before the performance, while School Y’s conductor did not, primarily because of the ensembles’ *a cappella* literature. Teaching from the piano may have made it more difficult for School X’s director to give the choir adequate conducting gestures that may have resulted in the higher levels of verbal instruction at this school.

Davis stated that all of the choirs required more instruction in the beginning rehearsals but that as the semester went on, student capability increased and they responded more effectively to non-verbal cues such as eye contact and conducting gestures. Davis noted that in each school, both the beginning and advanced choirs improved at the same rate, despite the fact that the more advanced groups sang more difficult repertoire, had more years of singing experience, and displayed a higher level of maturity than the beginning choirs. He speculated that the “equal pacing of performance gains observed. . . was a result of the personal affect of the teacher or their individual instructional pacing or style...the rate of ensemble achievement seems unique to the director” (501).

Yarbrough and Henley (1999) investigated whether shifting the camera focus of videotaped choir rehearsals from teacher to students affected the evaluations of observers. In this study, 176 university undergraduate and graduate music majors from four large state universities were randomly assigned to one of two groups. Previously taped choral rehearsals of one university choral faculty member and one choral ensemble were divided into seven excerpts, which consisted of two different camera angles; one focused on the conductor, the other focused on the ensemble. Participants viewed a stimulus tape of the 7 excerpts focused on either the conductor or the ensemble, depending on their group assignment. During the viewing, the participants rated the conductor or the ensemble (depending on which tapes they viewed) on a scale from 1 (lowest) to 10 (highest). Characteristics rated on the evaluation forms included the following: “use of rehearsal time, musicianship, accuracy of instruction, student attentiveness, student performance quality, and overall teaching effectiveness” (312). In addition, the characteristics of enthusiasm and intensity were rated on a scale from “low to high”, the characteristic of pacing was rated “slow to fast”, and the characteristic of personality was rated from “dull to sparkling” (ibid).

The data represented mean evaluations for ten categories of both student and teacher behaviors in each of the 7 excerpts and additional comments written on the evaluations were categorized as either positive or negative. The independent variables in the study included “focus of evaluator attention (students or teacher), gender of evaluator (male or female), level of evaluator (graduate or undergraduate), major of evaluator (vocal or instrumental), university, and the 7 different excerpts (ibid).

Dependent variables were mean ratings for 7 excerpts and mean ratings for the 10 categories (obtained by averaging the ratings of each of the 10 categories across the 7 excerpts” (ibid).

Significant interactions revealed that the teacher focus tape rated significantly higher ($M = 6.79$) than the student focus tape ($M = 5.75$) and “data demonstrated a significant difference between excerpt ratings given by subjects who viewed the teacher versus those given by subjects who viewed the students in the ensemble” (313). Overall, excerpts rated highest contained the following traits: “a low percentage of student off-task behavior (6.53 %), a high percentage of teacher approvals (71%), moderate eye contact (27.30%), many activity changes (23%), a high percentage of student response time (66%), and rapid pacing as indicated by an average length of both teacher and student activities of 5-6 seconds” (315). Yarbrough and Henley discussed that enough research exists to show the “importance and effectiveness of these variables” but state that they are often the most difficult to teach in university music education courses (317). This study raised further questions on how to more effectively teach these characteristics to undergraduate and graduate music education majors. In addition, it provided some preliminary data, which suggested that researchers investigating the evaluation of videotaped choral rehearsals and/or performances may wish to include camera position as a variable in their studies.

Discussion

After reviewing the current research, it was noted that studies in the area of choral music education have increased since Grant and Norris published their findings.

Though this study examined a shorter period of time than did prior research syntheses, it would appear that greater numbers of published choral music education studies exist now than in the past. The majority of the reviewed research was produced during the two-year period following the Grant and Norris article, probably in response to their calling for more research in general.

As stated earlier, this study attempted to determine the following: (a) whether research studies in choral music education have increased beyond doctoral dissertation studies, (b) whether previous research studies have been replicated and/or expanded, and (c) whether current research trends have attempted to solve real-world problems in choral music education.

To address the first question, (a) whether research has continued beyond the doctoral dissertation level, the answer is both yes and no. In fact, research beyond the scope of the doctoral dissertation exists in higher numbers than previously indicated. However, approximately one-fourth of the reviewed articles *were* based on authors' doctoral dissertations that were later published in peer-reviewed journals. While this is somewhat encouraging since the published dissertations created more accessible research for music educators, subjected them to the scrutiny of peer-review, and probably resulted in a higher standard of literature than those not published, it is also somewhat discouraging because few of these published dissertations were ever replicated or expanded. In addition, data from most of these studies were preliminary, therefore they did not really produce any conclusive results.

Furthermore, because of the time, money, and topic constraints on many doctoral candidates, many of these studies were narrow in scope, testing small populations over short periods of time.

To address the second question, (b) whether previous research studies were replicated and/or expanded, the trend found among the published dissertations generally applied to the other studies as well. Though many of the studies were thoughtful and well-designed, the vast majority of them were neither repeated and/or expanded, nor were many of the unanswered questions inevitably raised in many of the studies ever explored. In regards to the types of studies conducted, the experimental studies called for by Gonzo in 1973 increased dramatically in recent years as choral music researchers became more familiar with data collection and quantitative analysis. However, it must be noted that though experimental studies are appropriate and necessary in many cases, they may not always be the most appropriate method in a profession rooted in aesthetics and human emotion. If researchers do not begin to take a more comprehensive approach by producing more qualitative and longitudinal studies along with descriptive and experimental research, choral music education research will not provide a comprehensive, complete picture of the current situation of the profession.

Third and most important, (c) do current research trends attempt to solve real-world problems in choral music education? This is an area that still needs improvement. Since many of the published studies were originally doctoral dissertations, their primary goal may have been to fulfill a graduation requirement and as such, may not have addressed the most pressing issues in the profession. In a collegiate setting, research

questions often arise from the curiosity of the investigator or from the suggestion of a supervising professor or colleague. Although this can produce meaningful research, these topics are often quite diverse. In turn, this may cause a lack of study replication. For this reason, choral music educators cannot, with confidence, accept the results of these studies until replication produces similar, reliable results.

In addition, though many university professors are well-tuned to what is happening in K-12 education, those who have been out of public school teaching for a number of years or those who never taught within the K-12 system may not be as well-versed in the topics relevant to elementary and secondary choral music education. It is important for individuals conducting research at the university level to possess a realistic perspective regarding the status of K-12 choral music teaching in order to produce meaningful, useful research in the field.

Indeed, while the field of choral music education is vast, an effort must be made to focus on topics relating to the real issues that choral music educators and students face on a daily basis. For instance, few of the studies addressed the National Standards for Music Education (MENC, 1994), even though they have been published for nearly a decade. Studies on how to address the standards in a choral curriculum would be supremely beneficial to both educators and students alike. In addition, studies relating to technology were non-existent except for the occasional data-collecting instrument used for quantitative analysis. Studies related to the uses of technology in the choral classroom are desperately needed if the members of our profession wish to keep up with current trends in education in a multimedia driven society.

Furthermore, choral music professionals must offer more support for research endeavors. Ironically, members of the profession are often the ones who systematically discourage research at the expense of teaching and performing. Indeed, choral music educators are often forced to “wear many hats” in the profession, leaving them less time to focus on research. In addition, many of the major publications serving the choral music community, including *Choral Journal* and *American Choral Review*, do not regularly address choral music education research. Choral music professionals must make a concerted effort to pursue and promote educational research as a means to increase knowledge and understanding of their art.

As Demorest (1998b) stated in his review of sight-singing literature, a *connection* must be made between observations of student behavior and student achievement (11). Research needs to better reflect a comprehensive choral music education curriculum. Although a few of the studies, such as those by Demorest (1998a) and Broomhead (2001), attempted to connect research with the learning achievement of individual students, many of the studies focused on ensemble rather than individual achievement. While participation in an ensemble may certainly benefit students in numerous ways, ultimately it is a student’s individual progress and achievement that determines whether learning has taken place.

In conclusion, the state of choral music education research continues to evolve. Research in general appears to have increased, researchers continued to familiarize themselves with data collection and analysis, and recent studies better reflected choral music as it pertained to education rather than the more fragmented approaches first

reported by Gonzo in the early 1970's. However, increased studies beyond the dissertation level, replication of past studies, and most important, studies that attempt to address issues which practicing K-12 educators and students perceive as relevant are needed if choral music educators desire to serve their profession and their students to the best of their ability.

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